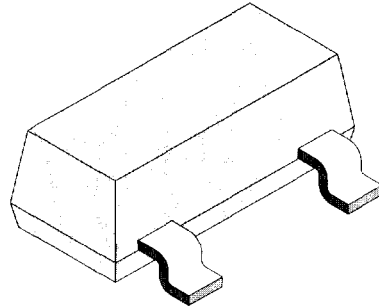


## Silicon Epitaxial Planar Diode

### Features

- Ultra fast switching speed
- Surface mount package ideally suited for automatic insertion
- High conductance



94 8550

### Absolute Maximum Ratings

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Non repetitive peak reverse voltage		$V_{RM}$	100	V
Repetitive peak reverse voltage =Working peak reverse voltage =DC Blocking voltage		$V_{RRM}$ $=V_{RWM}$ $=V_R$	75	V
Peak forward surge current	$t_p=1\text{s}$	$I_{FSM}$	1	A
	$t_p=1\mu\text{s}$	$I_{FSM}$	2	A
Average forward current	half wave rectification with resistive load and $f \geq 50\text{ MHz}$ , on ceramic substrate 8mmx10mmx0.7mm	$I_{FAV}$	150	mA
Forward current	on ceramic substrate 8mmx10mmx0.7mm	$I_F$	300	mA
Power dissipation	on ceramic substrate 8mmx10mmx0.7mm	$P_{tot}$	350	mW
Junction and storage temperature range		$T_j=T_{stg}$	-55...+150	$^\circ\text{C}$

### Maximum Thermal Resistance

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on ceramic substrate 8mmx10mmx0.7mm	$R_{thJA}$	357	K/W

## Electrical Characteristics

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=1\text{mA}$	$V_F$			715	mV
	$I_F=10\text{mA}$	$V_F$			855	mV
	$I_F=50\text{mA}$	$V_F$			1	V
	$I_F=150\text{mA}$	$V_F$			1.25	V
Reverse current	$V_R=75\text{V}$	$I_R$			1	$\mu\text{A}$
	$V_R=75\text{V}, T_j=150^\circ\text{C}$	$I_R$			50	$\mu\text{A}$
	$V_R=25\text{V}, T_j=150^\circ\text{C}$	$I_R$			30	$\mu\text{A}$
Diode capacitance	$V_R=0, f=1\text{MHz}$	$C_D$			4	pF
Reverse recovery time	$I_F=10\text{mA}$ to $I_R=1\text{mA}, V_R=6\text{V}, R_L=100\Omega$	$t_{rr}$			6	ns

## Characteristics ( $T_j = 25^\circ\text{C}$ unless otherwise specified)

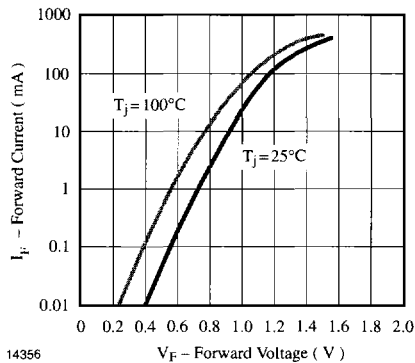


Figure 1. Forward Current vs. Forward Voltage

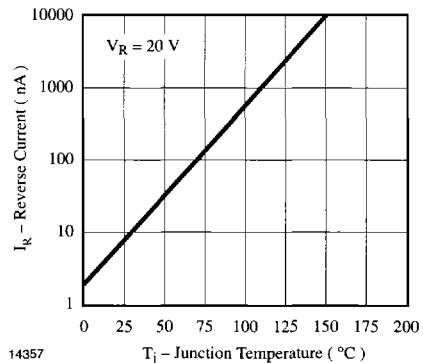
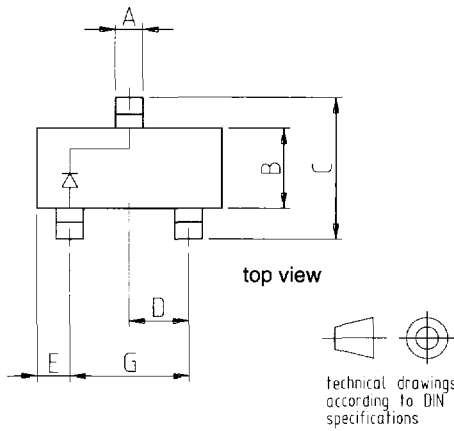
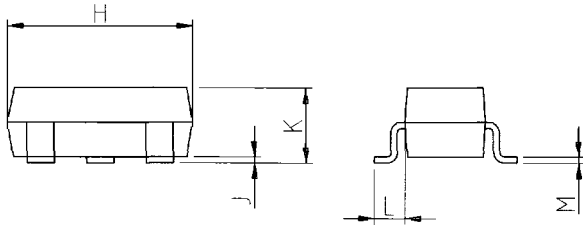


Figure 2. Reverse Current vs. Junction Temperature

**Dimensions in mm**



14370

SOT-23		
Dim	Min	Max
A	0.37	0.50
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.79	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.130
All Dimensions in mm		

Case: SOT23, plastic  
 Terminals: Solderable per MIL-STD-202, Method 208  
 Polarity: cathode band  
 Marking: KA6  
 Approx. weight: SOT23 0.008 grams